

# Myrmecophilous notes for 1906 (with plate).

By H. St. J. K. DONISTHORPE, F.Z.S., F.E.S.

(Continued from p. 289.)

*Homalota parallela*, Man.—I had the pleasure of taking this little "Staph." with *Formica rufa*, at Corbridge, in Northumberland, in company with my friend, Mr. Bagnall, as also the minute *Ptilium myrmecophilum*, All. The former has only been recorded from Scarborough and Scotland heretofore. Mr. Bagnall has also added *Notothecta anceps*, Er., *N. flavipes*, Gr., *Leptacinus formicetorum*, Märk., *Quedius brevis*, Er., *Monotoma conicicollis*, Aub., and *M. formicetorum*, Th., to the Northumberland and Durham list this year.

*Notothecta confusa*, Märk., was not uncommon at Wellington College, and I also took it at Pyrford, with its host, *Lasius fuliginosus*.

*Lamprinus saginatus*, Gr., has again been taken by Commander J. J. Walker, at Tubney, with *Myrmica ruginodis*, and Mr. Chitty took it in October with *Ponera contracta*, at Charing.

*Heterothops quadripunctula*, Gr.—I have taken several specimens with *Lasius fuliginosus*, at Wellington College. I have also taken it with *Formica rufa*, at Weybridge, as has also Mr. Harwood, at Colchester. These are not the true *quadripunctula*, Gr., and I am not quite satisfied if they are the same species (*H. nigra*, Kr.) which Dr. Joy has found in such numbers in moles' nests. They appear to me to be a little larger, the punctuation more alutaceous, and consequently not so shining. The latter species is said to be a var. of *H. praevia*, Er., but, I agree with Joy, without sufficient evidence.

*Quedius brevis*, Er.—Mr. Champion tells me he took this species with *Formica sanguinea*, at Woking. It has only been recorded with *F. rufa* and *Lasius fuliginosus* heretofore.

*Bythinus glabratus*, Rye.—Mr. Chitty still continues to take this rare species with *Ponera contracta* at Charing.

*Coccinella distincta*, Fald., was very common at Weybridge, on and about the nests of *F. rufa*, in May.

*Trichonyx märkeli*, Aub., was again taken by Mr. Dollman, at Ditchling, in April, this time with *Lasius flavus*.

*Amphotis marginata*, F.—I took this species in some numbers at Wellington College, and also at Pyrford, with its host *Lasius fuliginosus*, and I bred a specimen out of my observation nest, of the same ant, in October. I may mention that I bred *Dinarda märkeli* in my *F. rufa* nest from Weybridge, and I took the larvæ of both *Myrmedonia laticollis* and *Quedius brevis*, in plenty, with *L. fuliginosus*, at Wellington College.

FORMICIDÆ.—*Formicoxenus nitidulus*, Nyl.—This appears to have been a good year for this rare little ant. Mr. Bagnall took it in plenty with *F. rufa* at Corbridge, in Northumberland, and also in Durham, taking ♂s, ♀s, and ♂s, the ♂ not having been recorded from Britain before. Mr. Jackson took it with *F. rufa* at Bournemouth, and I took it with the same ant at Weybridge, in April, May, and July, and also had the pleasure of taking it with both these gentlemen in their localities.

*Leptothorax acervorum*, F.—I have taken this ant occasionally with *Formica sanguinea* at Woking, and Mr. Pool took it with *F. rufa* at Enfield; taking winged ♂s and ♀s also.

**HETEROPTERA.**—*Alydus calcaratus*, L.—I took a larva of this bug (in which stage it is very like an ant) running on a hot sandy bank in company with *Formica fusca* in the New Forest. The specimen was so ant-like that, even after I had put it in a tube, Professor T. H. Beare, who was with me, thought it was an ant. I also took it with *F. sanguinea* at Woking, and at Niton, Isle of Wight, in July, in all its stages, running on a path in company with *F. fusca* and *Lasius niger*.

**ARANEINA.**—*Thyreosthenius biovata*, Camb.—I have taken this little spider with *F. rufa* at Woking, and, in October, with Mr. Pool, at Enfield. Mr. Bagnall has taken it in Northumberland. These are new localities for it. I believe it occurs wherever *F. rufa* is found.

*Evansia merens*, Camb.—I took five specimens with *F. fusca* at Barmouth, in June. Mr. Bagnall has taken it with *F. fusca* at Winlaton, and Dr. R. Jackson, with the same ant, at Corbridge. I find I took it with the same ant at Hayton Moss, in Cumberland, in 1903, though I have not recorded it before.

*Cryphoeca divisa*, Camb.—I this year took five ♀s of this rare spider on one occasion, and several more at other times, with *Lasius fuliginosus*, at Wellington College. I once took a ♂ with the same ant at Oxshott. Before that only a single specimen, a ♀, had occurred at Carlisle, in this country.

It is probable that all these three species are truly myrmecophilous, the first two undoubtedly are, but the following spiders are, I understand, chiefly found in other situations; still, as they have been found before with ants, and continue to turn up in such places, it seems advisable to record their capture here.

*Phrurolithus festinus*, C. K.—I took this species with *F. sanguinea*, and also with *Lasius niger*, at Woking. I have before taken it with *F. rufa* and *L. fuliginosus* at Oxshott, and Father Wasmann records it with *L. niger*, *L. brunneus*, and *L. fuliginosus*.

*Harpactes hombergi*, Sep.—I have taken it with *L. fuliginosus* at Wellington College and Pyrford, it used to occur frequently with the same ant at Oxshott, and Father Wasmann gives the same host.

*Micaria pulicaria*, Saund.—I took it in a nest of *F. sanguinea* at Woking. I found it before with *L. niger* at Mickleham, to which ant it bears a strong superficial resemblance.

*Microneta innotabilis*, Camb., and *M. viaria*, Blk.—Both taken with *L. fuliginosus* at Wellington College. I took these species before with both this ant and *F. rufa* at Oxshott.

*Hahn timer helvola*, E. S.—Taken with *L. fuliginosus* at Wellington College, also recorded from ants' nests by Wasmann.

*Theridium riparium*, Blk.—Taken twice with *F. sanguinea* at Woking. "With *L. niger*" (von Hasselt). "Hunts *Myrmica laevinodis*" (Henking). Blackwall writes "it feeds on ants."

**LEPIDOPTERA.**—*Polyommatus corydon*.—Mr. A. L. Rayward records (in the *Entomologist*, 1906, p. 197) that, in June last, he found the larvæ of this butterfly on *Hippocrepis comosa*, at Reigate, and that they nearly all had ants (*Lasius flavus*) upon them. He found that the ants stroked the gland on the 7th abdominal segment, and sucked the fluid that exuded from it.

*Polyommatus bellargus*.—Mr. Rayward subsequently discovered at Folkestone (*loc. cit.*, p. 219) the larvæ of *bellargus* attended by *Lasius*

*niger*, he found, however, that *L. flavus* much more readily suck the gland of these caterpillars than *L. niger*.

It is very satisfactory to have had these observations made in England, and we congratulate Mr. Rayward. Father Wasmann records, among what he calls the "honey caterpillars," *Lycaena argus*, larvæ with ants, pupæ in the nests of *Lasius niger*. *Lycaena doryllas*, larvæ almost always in company with ants on *Anthyllus vulneraria*. He also writes that the dorsal opening of the 11th segment is present in the larvæ of the European *Lycaena boetica*, *icarus*, *argiolus*, *aegon*, and *medon*, which, on being sought by the ants, is caused to shut.\*

PROCTOTRUPIDÆ.—*Exallonyx wasmanni*, Kief.—I have taken this species (♂s and ♀s) with *Lasius fuliginosus* at Wellington College. It is new to Britain.

*Tropidopria fuliginosa*, Wasm.—I have taken this species (♂s and ♀s) with *Formica rufa* at Corbridge, in Northumberland, and have bred it out of my observation nest of the same ant from Weybridge. I have also taken it with *Lasius fuliginosus* at Wellington College. This is its first record for Britain.

*Megaspilus* sp.?—I have captured ♂s and ♀s of a small species of this genus with *F. rufa* at Weybridge and Corbridge.

*Synopeas* sp.?—I took a specimen in a nest of *F. fusca* at Barmouth last June.

*Ceraphron* sp.?—I took a very small species of this genus with *F. rufa* at Corbridge, in April.

*Anteon brevifilis*, Kief.—I took a specimen in a nest of *Formica fusca* at Niton, Isle of Wight, in July.

I must thank Dr. Kieffer for having very kindly named all the above species for me.

*Pseudisobrachium cantianum*, Chitty.—Mr. Chitty has described this new species from a specimen he took at Charing in a nest of *Ponera contracta*. The insect bears a strong resemblance to the ant with which it was found.

*Pseudisobrachium subcyaneum*, Hal.—Only the ♂ is known of this species. Mr. Chitty, who has taken it not uncommonly in the Faversham district, suggests it is parasitic on *Myrmecina latreillei*.

ICHNEUMONIDÆ.—*Hemiteles subzonatus*, Gr.—I took a ♀ specimen in a nest of *Formica rufibarbis* var. *fusco-rufibarbis* at Whitsand Bay, in September. Mr. Morley kindly named it for me. Nothing is known of the life-history, it is very possibly parasitic on the ant.

(To be continued.)

### Some remarks on the physiological criterion of species.

By W. E. SHARP, F.E.S.

In a recent issue of this magazine (*Ent. Record*, xviii., p. 217) there appeared a very interesting note on the British species of the coleopterous genus *Dinarda*, Grav., by Mr. Donisthorpe, but, although the article introduces a new species to our list, no morphological specific distinctions are tabulated, and the stress laid on physiological data (that of difference of association) leaves one under the impression that

\* For further details of this subject see *Nat. Hist. of British Butterflies*, pp. 30-37, also *Ent. Rec.*, xviii., p. 299.—Ed.